## (19) World Intellectual Property Organization

International Bureau



## ! (Care aliment i coltre didit alim alim alim i ki di adala didit alim alim alim didit didit.

(43) International Publication Date 10 February 2005 (10.02.2005)

**PCT** 

## (10) International Publication Number WO 2005/012010 A1

(51) International Patent Classification<sup>7</sup>: 9/02, 7/00, B60K 17/16

B60G 3/24,

(21) International Application Number:

PCT/US2004/025719

(22) International Filing Date: 28 July 2004 (28.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/490,498

28 July 2003 (28.07.2003) US

- (71) Applicant (for all designated States except US): MAGNA INTERNATIONAL, INC. [CA/CA]; 337 Magna Drive, Aurora, Ontario L4g 7K1 (CA).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): IMRE, Christian [AU/US]; 529 Jacob Way 205, Rochester, MI 48307 (US). O'CONNOR, James, P. [US/US]; 3133 Sandoval Drive, Lake Oriion, MI 48360 (US).
- (74) Agent: SIMONELLI, David, J.; Clark Hill PLC, Suite 3500, 500 Woodward Avenue, Detroit, MI 48226-3435 (US).

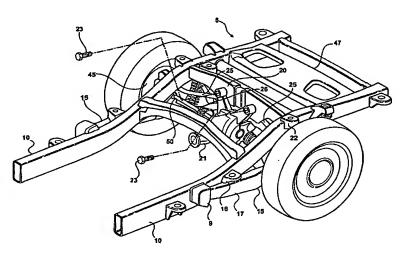
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

[Continued on next page]

(54) Title: FRAME INTEGRATED REAR SUSPENSION



(57) Abstract: An integrated rear suspension assembly (5) is fixedly secured to a transmission case (21), rear wheel carriers and frame rails (10) of a motor vehicle. The integrated rear suspension assembly includes a plurality of trailing arms (15) having first and second ends. Each of the first ends is secured to one of the frame rails (10) and each of the second ends is secured to each of the rear wheel carriers. A plurality of control arms (25) is pivotally secured to each of the plurality of trailing arms (15) for controlling the plurality of trailing arms. A compound link member (30) having opposing ends is attached to each of the plurality of trailing arms. The integrated rear suspension assembly also includes a transmission cross member (20) that is fixedly secured to each of the frame rails (10). The transmission cross member includes fixtures that receive and secure the transmission case (21) and each of the plurality of control arms (25) thereto such that the transmission cross member facilitates the integrated rear suspension assembly and the transmission case to be assembled prior to securing said integrated suspension assembly to the frame rails.





For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.